

lariæ represent it, though there is uncertainty respecting the actual forms to be identified with *Calamites*. The roots were given off from the lower part of each internode, but above the node, and were apparently epidermal.

There is also considerable doubt respecting the fructification of *Calamites*. Some of the *Volkmanniæ* have evidently belonged to this group; but only one example retaining its minute organization has yet been found in which the structure of the central axes corresponded with that of the *Calamites*. The relationship to *Calamites* of the fruits figured by Binney under the name of *Calamodendron commune*, which are identical with the *Volkmannia Binneyi* of Carruthers, is more than doubtful, because of the anomalous structure of their central axes.

After a careful comparison of the organization of *Calamites* with that of the recent Equisetaceæ, the author prefers constituting the former an independent order, distinct from, though allied to, the Equisetums, under the name of *Calamitaceæ*, and characterized by cryptogamic fructification and verticillate foliage, associated with an exogenous axis. The latter feature probably involved the existence of something resembling a cambium layer, furnishing the material for the new tissues.

It is further proposed to divide these plants into two generic groups, viz. *Calamites* and *Calamopitus*—the former to comprehend those unprovided with infranodal canals, and the latter those which possess them. The existing specific distinctions appear to have little or no scientific value.

#### MISCELLANEOUS.

*On a new Species of Three-toed Sloth from Costa Rica.*

By Dr. J. E. GRAY, F.R.S. &c.

*Arctopithecus griseus.*

Fur very long, greyish white; under-fur very abundant, brown; forehead and cheeks white; crown and temples black; chin and throat brown. *Male* with a yellow patch of soft hair between the shoulders, with a central black streak. *Female* with a puff of very soft white hair on each side of the back.

*Hab.* Costa Rica (Salvin). Brit. Mus.

*On a new Form of Sponge.* By Prof. EILERS.

*Aulorhipis elegans*, n. g. et sp.

The stratified tissue of this sponge, which encloses many foreign bodies, lines the inner surface of a worm-tube, from the superior opening of which it projects in the form of a little stalk, which forks into two branches bending downwards in the same plane, and gives off from each branch several (eight to ten) twigs directed upwards,